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Docket-222

FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554

POLICY & PLANNING  
BRANCH ROOM 5202

2 APR 1993

IN REPLY REFER TO:

7330-7/1700A3

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APR 13 1993

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

Lowell Police Department  
428 E. Commercial Avenue  
Lowell, Indiana 46356

Dear Sirs:

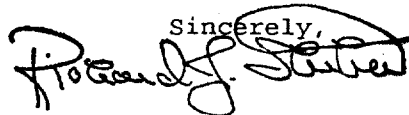
This is in reply to your comments regarding the Notice of Proposed Rule Making (Notice) in PR Docket No. 92-235, 57 FR 54034 (1992) which you sent to Senators Lugar and Coats. This Notice proposes comprehensive changes to the Commission's Rules governing the private land mobile radio services operating in the frequency bands below 512 MHz.

The proposals in the Notice reflect to a large extent concepts and proposals submitted in the initial inquiry stages of this proceeding. None of the proposals set forth in the Notice, however, are engraved in stone. Indeed, the proposals represent our best judgment at this stage of the proceeding on steps that must be taken to improve the regulatory climate for users of the private land mobile radio spectrum below 512 MHz. I have enclosed for your information a discussion paper released March 1, 1993.

We are, of course, sensitive to the needs of all users of spectrum and the impact that these proposals may have on their radio systems. Your comments will be included in the record of the proceeding and will be fully evaluated when we develop final rules in this proceeding.

We want to thank you for your interest in this proceeding. We expect final rules to be issued in 1994.

Sincerely,



Richard J. Shibben  
Chief, Land Mobile & Microwave Division

Enclosure

cc:  
Chief, LM&M Division  
Lou Sizemore, Room 857  
Docket Files, Room 222  
P&P Branch Files

CNTL NO - 9301346

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LABOR AND HUMAN  
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United States Senate

WASHINGTON, DC 20510-1403

RICHARD G. LUGAR  
INDIANA

COMMITTEES:  
AGRICULTURE  
FOREIGN RELATIONS

PRB  
92-235  
1346

March 10, 1993

Lauren Belvin  
Acting Director  
Office of Legislative Affairs  
Federal Communications Commission  
1919 M Street  
Washington, D.C. 20554

Dear Ms. Belvin:

Enclosed are comments received by Senators Lugar and Coats from the Lowell Police Department regarding PR Docket 92-235 presently under review by the Federal Communications Commission.

Your review of this matter and response directly to the

[REDACTED]



# LOWELL POLICE DEPARTMENT

428 E. COMMERCIAL AVENUE

LOWELL, INDIANA 46356

EMERGENCY 911 • ADMINISTRATION (219) 696-0411 • FAX (219) 696-7740

Before the  
Federal Communications Commission  
Washington, DC 20544

In the Matter of

Replacement of Part 90  
by Part 88 to Revise  
the Private Land Mobile  
Radio Services and Modify  
the Policies Governing them.

PR Docket 92-235

To: The Commission

## COMMENTS

\_\_\_\_\_ submits its comments  
in response to the Commission's notice of Proposed Rule Making in this  
proceeding, concerning:

1. Power Restrictions on Fixed Stations at Higher Elevations.
2. Channel Splitting.
3. Frequency Stability.
4. Consolidation of Private Land Mobile Radio Services.

Complete comments are provided on the following page.

Before the  
Federal Communications Commission  
Washington, DC 20544

In the Matter of

Replacement of Part 90  
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PR Docket 92-235

To: The Commission

COMMENTS

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1. Power Restrictions on Fixed Stations at Higher Elevations.
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3. Frequency Stability.
4. Consolidation of Private Land Mobile Radio Services.

Complete comments are provided on the following page.

FCC 92-469

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PR Docker No 92-235



**1. Power Restrictions:** This proposal, which would require licensees to reduce power depending on height above average terrain, is a two dimensional solution to a three dimensional problem that will not work and that we strongly oppose.

In most cases, high elevation transmitter sites are surrounded by natural obstacles such as other mountains. Environmental, economic and zoning concerns often prohibit use of the best transmitter site. Consequently, many transmitters are located miles away from the desired coverage area. To compensate for these factors, a licensee must use sufficient power to cope with geographic realities.

Air pollution and other exogenous factors can cause a dramatic loss of signal strength at the mobile receiver. Losses of 20 to 30 DB are frequently noted in the Los Angeles area during periods of high air pollution. Snow and ice on the antenna in winter can decrease the performance of the system as can foliage and trees during the growth season. Conditions around the receiver -- which, in a mobile unit, change continually -- often restrict reception. Clearly, radio systems must be designed to include sufficient reserve gain to have the dynamic range to reach its mobile receivers undiminished by variable environmental factors.

Under the Commission's proposal, specifying licensed output in terms of effective radiated power (ERP) would impose a subjective theoretical standard on the real world where it well may not be applicable. Line loss, antenna gain and directional distortions caused by the tower on which the antenna is mounted often will severely distort the realities of the equation.

At the present time, the mobile area of operation for many licensees is 75 miles around a base station or repeater. As this fact is recognized in existing licenses, the FCC should permit licensees to use adequate power to cover the area of operation specified in the license unaffected by the unreasonably low power limits described in the notice of proposed rulemaking.

**2. Channel Splitting:** The Commission's proposal, to reduce spacing to 5 kilohertz (khz) in VHF and 6.25 khz in UHF, is incompatible with mobile two-way radio systems. We strongly oppose this proposal unless and until new technology is tested, proven and readily available. These band widths are inappropriate because:

First, mobile communications begin and end with human speech. An extremely narrow bandwidth does not convey the audio quality and intelligibility needed to communicate speech effectively. Unless users are willing to utilize only non-voice data transmissions, channel spacings of 5 or 6.25 khz are unrealistic.

Second, channel spacings of 5 or 6.25 khz will result in interference to and from adjacent channels. Such channel spacings now work with microwave multiplex equipment only because those systems operate with carefully controlled, identical power levels. With continuously changing power levels encountered in mobile systems, interference will reach unacceptable levels.

Third, existing FM specifications provide proven, reliable and accepted standards for the industry. However, there is no standard for the type of equipment required by this proposal. Only one manufacturer has type-accepted equipment for the 220 band on which these technical standards apply. That



equipment, which is single side band (SSB), is unacceptable to most users because of its poor audio quality. Moreover, this equipment has not been proven on a large scale as no licenses have been issued on the 220 band. Although long available for the 150 band, it has not gained wide-spread acceptance due to poor voice quality. The cellular telephone industry is now testing both digital and analog time-division equipment in an effort to develop standards for narrow band transmission. Reports indicate that those systems that have been installed are providing less than satisfactory results.

We oppose implementation of channel spacings of 5 and 6.25 khz on the 150 to 512 bands until: such standards have been proven on the 220 band; an industry consensus has emerged for technology that meets these standards; and, manufacturers have proven equipment ready to be marketed.

**3. Frequency Stability:** The FCC's proposal, which would tighten frequency stability to one part per million (PPM) on mobile units, serves no useful purpose. The difference in performance from existing equipment, particularly in the 150 to 174 mega-hertz band will not be apparent. No commonly available test equipment is capable of accurately measuring compliance with the fixed station standard of 0.1 ppm. We oppose this proposal as it will only serve to make obsolete all existing radios and to make new radios far more expensive.

**4. Frequency Coordination:** The Commission's proposal, which would cut the number of coordinators from 19 to three, would wreak havoc on the frequency coordination system. The current system, which developed over many years, is generally accepted as fair and efficient. It permits various industries as well as state and local governments to have reasonable assurance that they will be able to obtain a frequency when needed and have a voice in the rule-making process.

To take this system, which works well, and scrap it in favor of one in which three groups would exert dictatorial power from centralized locations over the nation's use of private radio frequencies is to invite inefficiency, conflict and abuse of power. In particular, industrial and commercial users of two-way radios would be at a disadvantage in the proposal as they would all be placed in a single pool for frequency coordination and might not be able to obtain frequencies when needed.

Although the current rules provide for licensing of cooperatives, this will be eliminated under the new proposal. These co-ops add efficiency to the licensing and coordination process. The presence of a *de facto* coordinator on the scene ensures that frequency utilization within the spectrum licensed to the co-op is optimized. Elimination of this provision of the rules will lead to major problems for many small-scale users. Although there are some problems with the current coordination system, we oppose these changes as we believe this proposal will make coordination problems much more difficult for two way-radio users.

Respectfully submitted,

